

ABSTRACT

An automatic gain control (AGC) apparatus with a short settling time in a burst mode optical receiver is disclosed. The AGC apparatus includes a variable gain amplifier for variably amplifying an input signal according to an AGC adjustment control signal; a clipper coupled to an output terminal of the variable gain amplifier for comparing an output signal of the variable gain amplifier with a preset signal V_{cut} and for outputting a signal corresponding to the difference between these two signals if the output signal of the variable gain amplifier is higher than or equal to the preset signal V_{cut} in amplitude; an exponential amplifier for exponentially amplifying an output signal of the clipper; and a peak holder for detecting a peak value from an output signal of the exponential amplifier and for generating the AGC adjustment control signal for controlling a gain of the variable gain amplifier.